



# EPA Response to Hurricane Harvey

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CARL EDLUND

DIRECTOR, SUPERFUND DIVISION

REGION VI

# UNIFIED COMMAND

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# RESPONSE OBJECTIVES

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- Maximize the protection of public, health, and safety.
- Identify affected drinking water and wastewater systems in each area, evaluate the systems to determine their operational status and facilitate system contact with Federal, State, and Local agencies (provide technical assistance).
- Conduct wide area assessment to identify orphaned containers equal to or greater than 5 gallons, potential or actual discharges from vessels and/or facilities, and document the most effective means for recovery or mitigation in accordance with Natural Disaster Operations Workgroup and the approved Unified Command Vessel/Pollution Removal protocols.
- Prioritize, monitor, mitigate and/or recover identified pollution targets.
- Assess DHS critical infrastructure and RMP/FRP facilities for damage and immediate/ongoing releases.



# RESPONSE OBJECTIVES

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- Establish and maintain a common operating picture (COP).
- Identify and maximize protection of environmentally sensitive areas and threatened species.
- Manage a coordinated interagency response effort that reflects the composition of the Unified Command.
- Establish an IMT that can meet the initial and long-term challenges required for incident mitigation.
- Inform the public, stakeholders, and the media of response activities.
- Ensure appropriate financial accounting practices are adhered to.
- Establish a vessel recovery strategy.
- Establish a strong interagency partnership with public and private organizations to determine ownership and disposition of targets.



## Unified Command Mobile Command Post

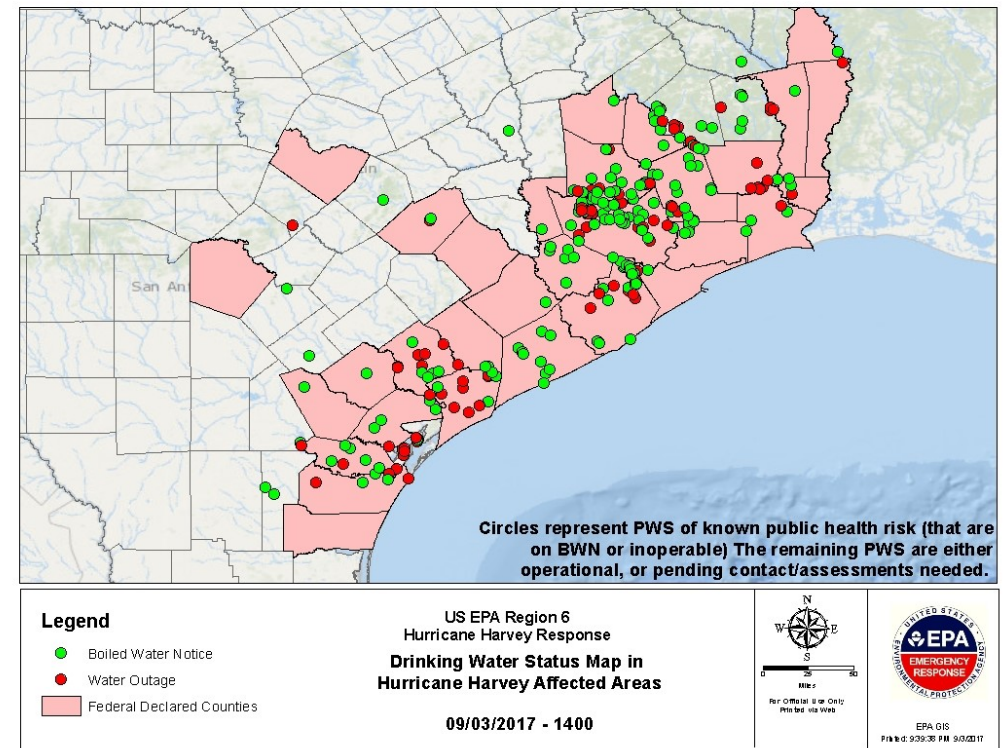
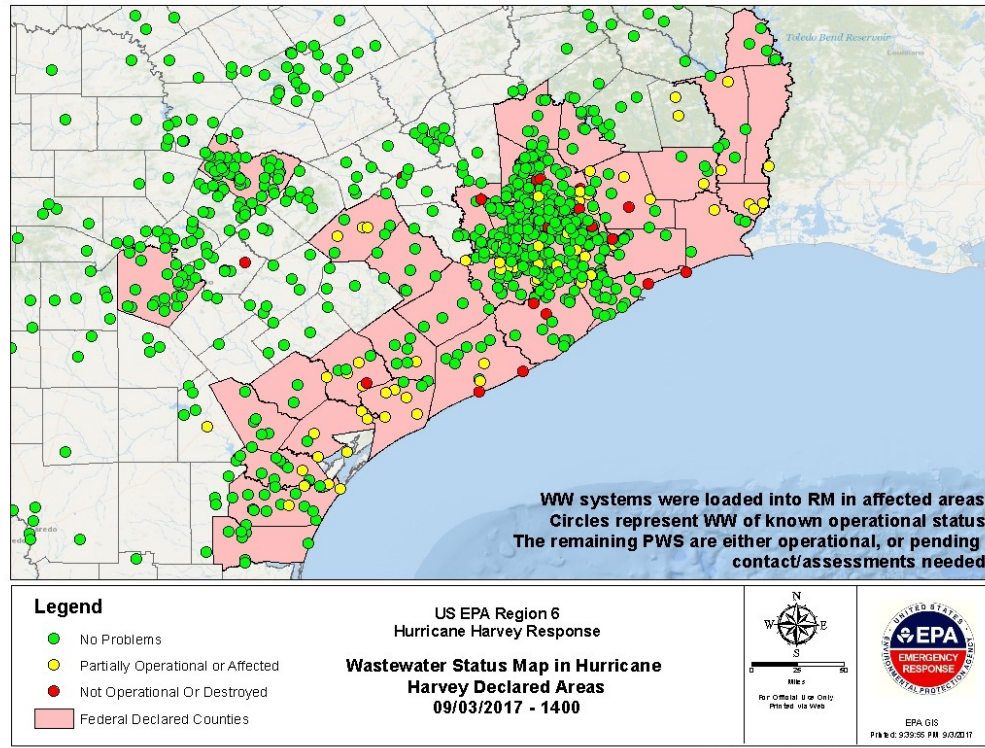




## Command & General Staff Meeting



# DW/WW Systems in Partnership with TCEQ



## Drinking Water and Wastewater Assessments (September 8, 2017)

Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	53	295
On-Site WW Assessments	26	193
Phone DW Assessments	331	4969
Phone WW Assessments	82	3017





# Accomplishments To Date

## \*\*Update Numbers in PM\*\*

- 93 Hazard Evaluations completed and closed
- 86 spills/discharge investigation completed
- 96 orphan containers recovered
- 168 drinking water assessments completed
- 115 waste water assessments completed
- 7 fuel waivers signed, 7<sup>th</sup> waiver covers 38 states
- 4 No Action Assurance letters signed
- Daily Aerial over-flights for air monitoring
- Ground support air monitoring
- 43 initial NPL site evaluations completed
- EPA fully integrated with TCEQ and TGLO in Unified Command





# Projected Work

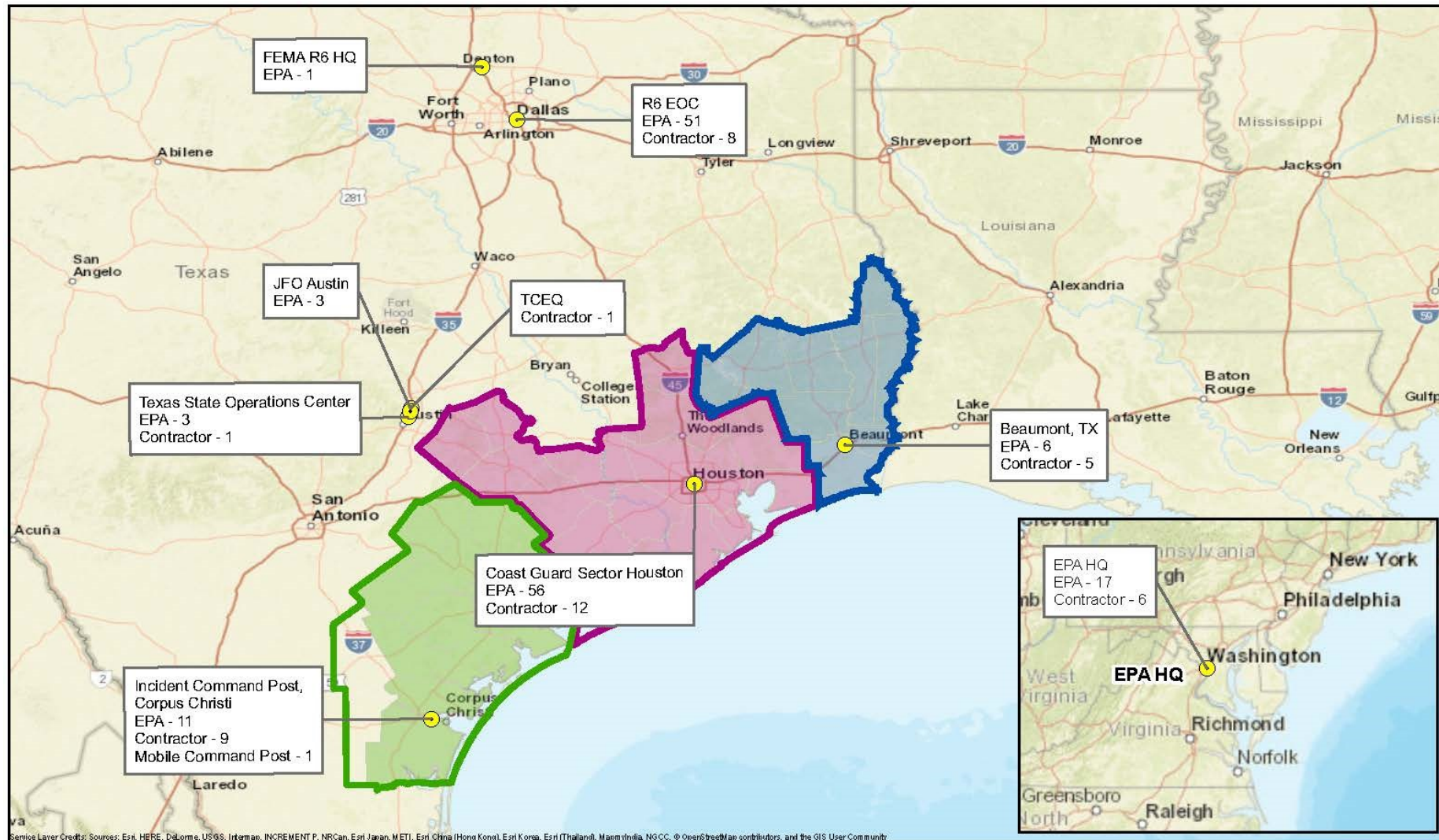
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- Mobile lab air monitoring in Port Arthur and Houston area this week
- Additional support to DW/WW teams
- Completion of NPL site sampling as soon as 9/11/17
- Private well testing
- Public outreach support for flood water hazards
- Container recovery
- Chemical and oil response as needed
- ASPECT
- Debris – EPA involvement uncertain at this time
  - Can perform collection of HHW, E-Goods, and White Goods if tasked





## EPA RESOURCES





# FUNDING

September 8, 2017, UPDATED 1300 hours

Funding Sources	Funding Ceiling	Funding Ceiling Less Indirect	Spent to Date	Remaining Balance	Daily Burn Rate	Days Remaining
Non Mission Assignment	N/A		\$64,200.00	\$0.00		
MA 4332DR-TX-EPA-01	\$275,000.00	\$242,741.00	\$24,816.00	\$217,925.00	\$2,848.00	76.52
MA 4332DR-TX-EPA-03	\$8,592,000.00	\$7,584,077.00	\$5,248,884.21	\$2,335,192.79	\$282,745.51	8.26
Totals:	\$8,867,000.00	\$7,826,818.00	\$5,337,900.21	\$2,553,117.79		

Indirect costs represent the money the Cincinnati Shared Service Center takes off the top to manage the Mission Assignments



# TAGA Activities

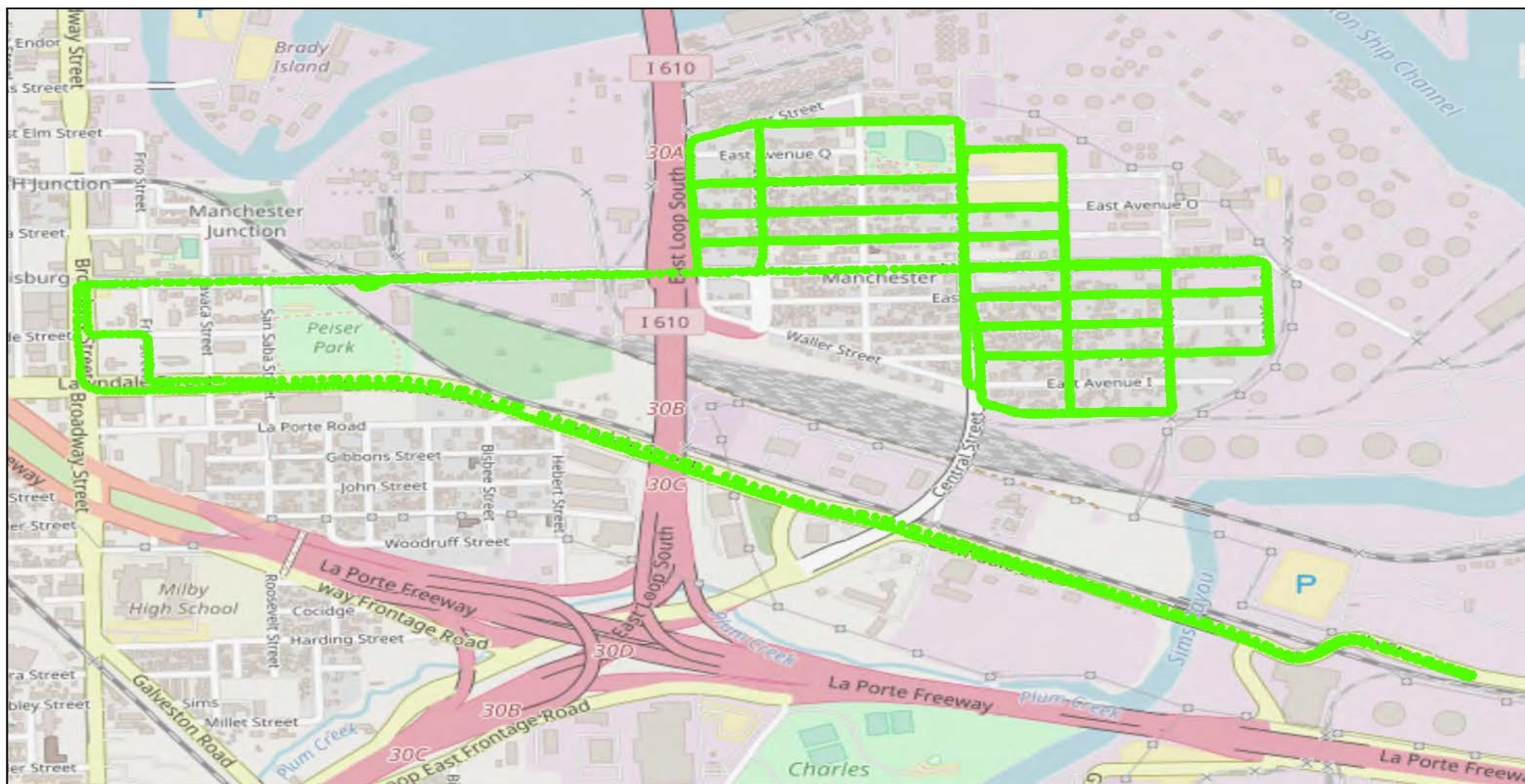
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- Refinery monitoring
- Sensitive community monitoring
- Chemical manufacturing corridor monitoring





# TAGA product



Substance	CAS #	Short-term AMCV Health (ppb)
1,1-dichloroethylene	75-35-4	180
benzene	71-43-2	180
m/p-xylene	179601-23-1	1700
o-xylene	95-47-6	1700
tetrachloroethylene	127-18-4	1000
toluene	108-88-3	4000
trichloroethylene	79-01-6	100

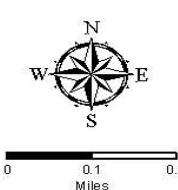
## Legend

- No Readings Above Benchmarks

### What's an AMCV?

AMCV is a collective term used to describe chemical-specific air concentrations used to evaluate air monitoring data that are set to protect human health and welfare. Short-term AMCVs are based on data concerning acute health effects. AMCVs may contain health-based Reference Values (RVs) and health- and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. ESLs are screening levels used in the TCEQ's air permitting process to establish maximum emission rates that are written into enforceable air permits. Health-based ESLs are set 70 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

## USA EPA REGION 6 TAGA Runs on 20170905



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# ASPECT Activities

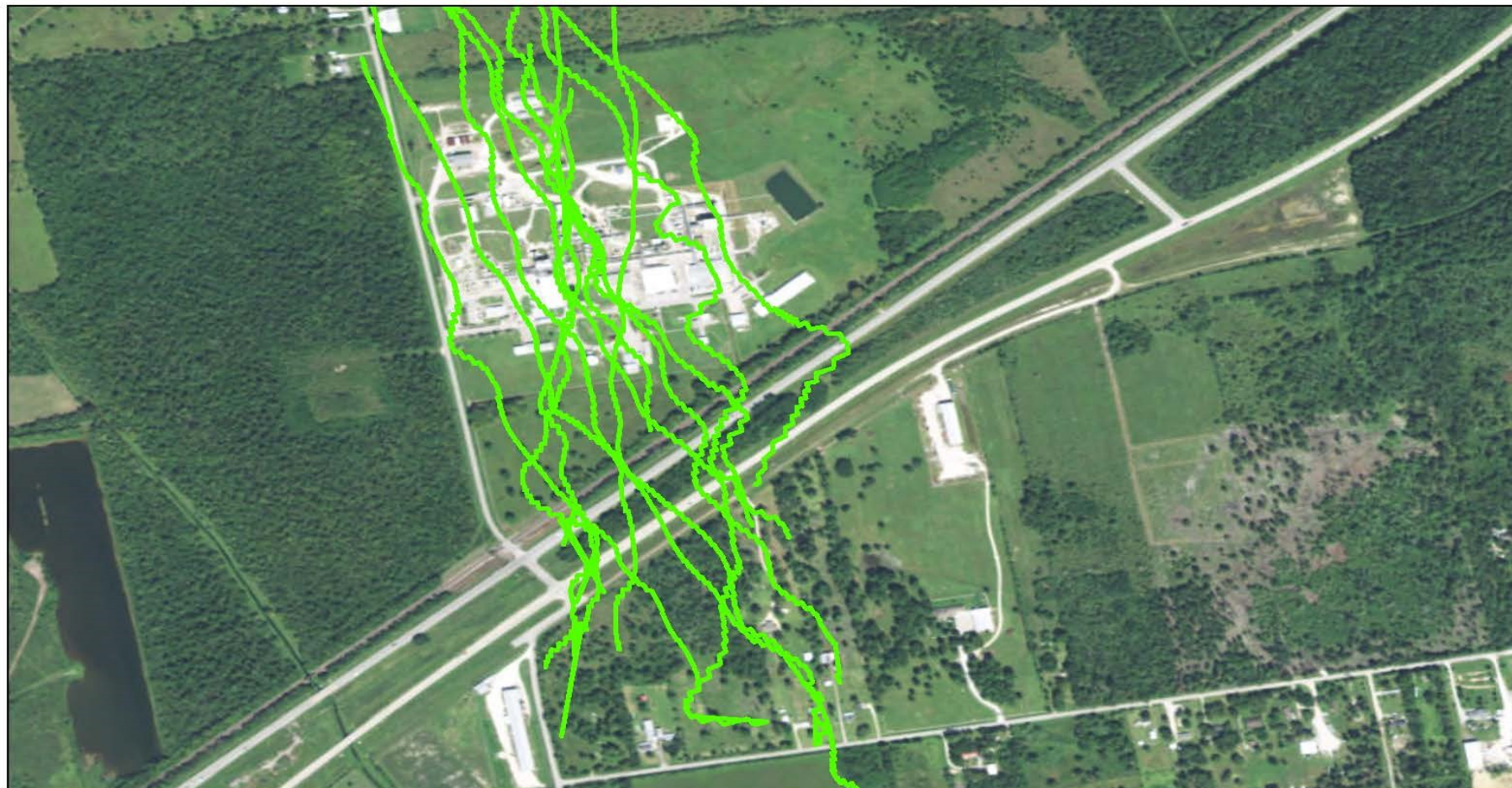
- DHS and DOE requested monitoring
  - Pipelines
  - Refineries
- Release assessment of chemical and oil storage facilities
- Release response support at the Arkema incident
- Aerial reconnaissance imagery to identify releases and orphan containers







# ASPECT flights



Chemical Compounds	Short-term AMCV (ppm)
1,1-dichloroethane	1.0
1-butene	27
acetone	11
dichlorodifluoromethane	10
ethyl acetate	4
ethylene	500
isobutane	33
methyl ethyl ketone	20
methylene chloride	3.4
n-butyl acetate	7.4
n-propyl acetate	2
propylene	Simple Asphyxiant
vinyl chloride	27

## Legend

— No Readings Above Benchmarks

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## USA EPA REGION 6 Flight 13 ASPECT



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# PHILIS Activities

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- On- Site Release assessment of analytical services
- Staging area sampling services
- Superfund site assessment analytical services





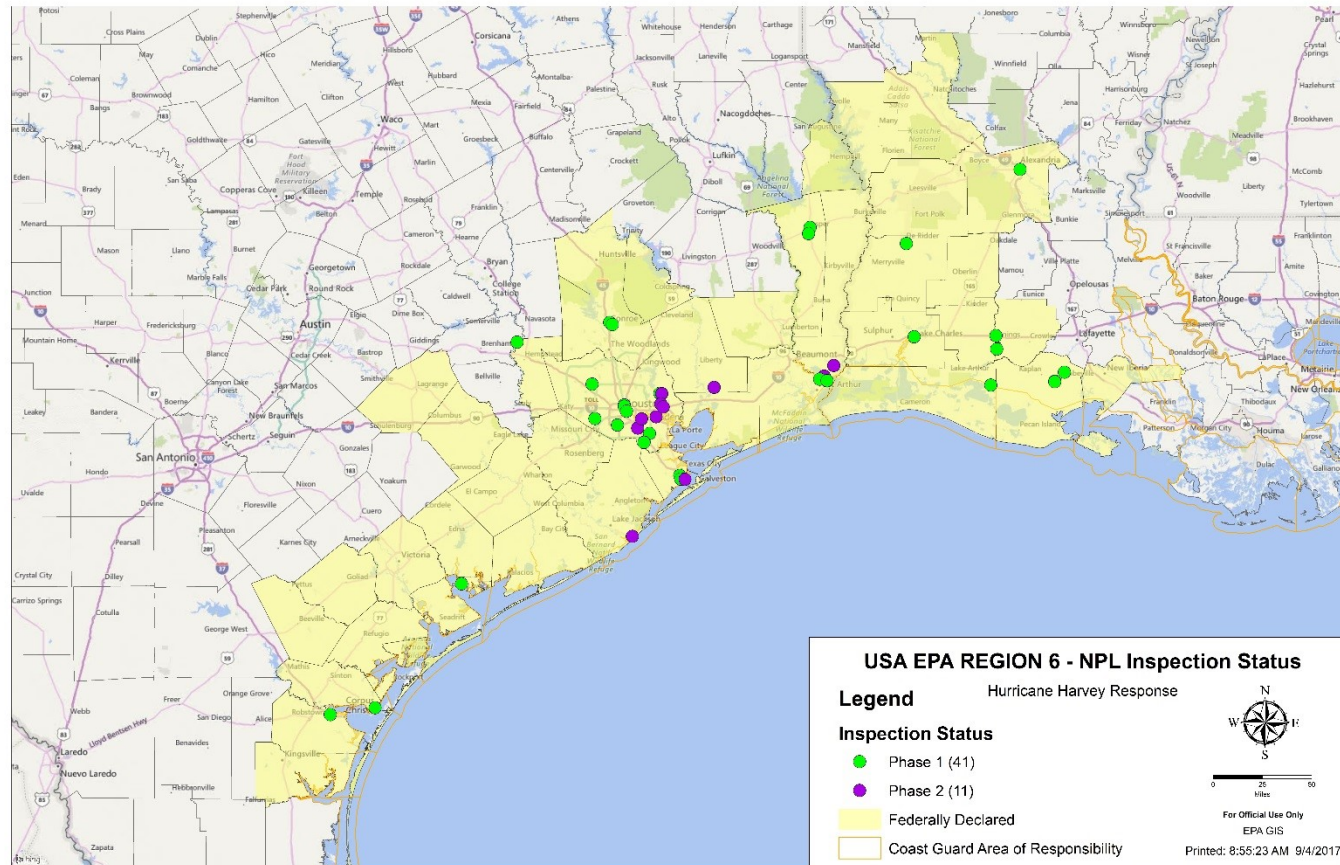


# Arkema Response





# NPL Site Inspections



All 43 Federal Superfund NPL Sites in the affected area have been assessed. Of these, 41 sites have been cleared, and two sites (San Jacinto Pits and US Oil Recovery) require additional follow-up.

- U.S. Oil Recovery Update: On September 7, a total of 16 vacuum truckloads of water were removed and shipped off-site for disposal. The PRP continues operating pumping equipment and a storage tank to maintain and control overflow. Sampling of the lift station water continues. Soil and ground water samples were collected on September 8. No sheen or odor was observed in the overflowing water.
- San Jacinto Waste Pits Update: Cap repairs and underwater cap surveying continue. The EPA dive team is on-site and integrated in the cap survey efforts. Sampling of sediment and surface water was completed on September 7.

On September 5, EPA initiated sampling at NPL sites in Texas. EPA will sample all 34 Texas NPL sites to confirm no releases. Sampling will be completed by September 11. Results will be delivered to the Region by September 14.



# Houston Visit Itinerary

